~~Patent Claims~~ What is claimed is:

1. Arrangement for predicting an abnormality of a dynamic system and for implementing an action opposing the abnormality,

a) whereby a measured data pick-up is provided that registers comparison measured data of the system and test measured data of the system,

b) comprising a processor unit that is configured such that the following steps can be implemented:

c) a neural network that describes the system is trained upon employment of the comparison measured data;

(2) a comparison information flow that describes a comparison dynamic of the system is determined upon employment of the trained neural network;

(3) a test information flow that describes a test dynamic of the system is determined upon employment of the test measured data;

(4) upon employment of the comparison information flow and of the test information flow, the abnormality is predicted as established when the comparison information flow differs significantly from the test information flow and the abnormality is predicted as not established when the comparison information flow does not significantly differ from the test information flow;

(5) when the abnormality of the system has been predicted as established, then the action is implemented;

c) whereby an actuator that implements the action is provided.

2. Arrangement according to claim 1, whereby the steps (2) and (5) of the processor unit form an endless loop.

3. Arrangement according to claim 1 or 2, whereby the abnormality is predicted as established when test information flow is significantly smaller than the comparison information flow.

A17 Amended

4. Arrangement according to claim 3, whereby the action is comprised in exciting the system with a chaotic signal.

A18 Amended

5. Arrangement according to claim 4, whereby the action is comprised in suppling noise to the system.

A19 Amended

6. Arrangement according to claim 5, whereby the noise is supplied on the basis of a corresponding electrical field.

A20 Amended

7. Arrangement according to claim 6, whereby the electrical field is supplied on the basis of at least one electrode.

A21 amended

8. Arrangement according claim 5, whereby the noise is supplied on the basis of a corresponding magnetic field.

A22 Amended

9. Arrangement according to claim 8, whereby the magnetic field is supplied on the basis of at least one electrode.

A23 Amended

10. Arrangement according to claim 1 or 2, whereby the abnormality is predicted as established when test information flow is significantly greater than the comparison information flow.

A24 Amended

11. Arrangement according to claim 10, whereby the action is comprised in exciting the system with a regular signal.

A25 Amended

12. Arrangement according to claim 11, whereby the regular signal is supplied on the basis of an electrical field.

A26 Amended

13. Arrangement according to claim 11, whereby the electrical field is supplied on the basis of at least one electrode.

A27 Amended

14. Arrangement according to claim 11, whereby the regular signal is supplied on the basis of a magnetic field.

A28 Amended

15. Arrangement according to claim 14, whereby the magnetic field is supplied to the system on the basis of at least one electrode.

Sub B3 A29 Amended

16. Method for predicting an abnormality of a dynamic system and for implementing an action opposing the abnormality, whereby

a) comparison measured data of the system and test measured data of the system are measured,

b) a neural network that describes the system is determined upon employment of the comparison measured data;

c) a comparison information flow that describes a comparison dynamic of the system is determined upon employment of the neural network;

cont. A79 Amended

d) a test information flow that describes a test dynamic of the system is determined upon employment of the test measured data;

e) upon employment of the comparison information flow and of the test information flow, the abnormality is predicted as established when the comparison information flow differs significantly from the test information flow and the abnormality is predicted as not established when the comparison information flow does not significantly differ from the test information flow;

f) when the abnormality of the system has been predicted as established, then the action is implemented.

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17. Method for predicting an abnormality of a dynamic system, whereby

a) comparison measured data of the system and test measured data of the system are measured,

b) a comparison information flow that describes a comparison dynamic of the system is determined upon employment of the comparison measured data;

d) a test information flow that describes a test dynamic of the system is determined upon employment of the test measured data;

e) upon employment of the comparison information flow and of the test information flow, the abnormality is predicted as established when the comparison information flow differs significantly from the test information flow and the abnormality is predicted as not established when the comparison information flow does not significantly differ from the test information flow.

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add B4

B5